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To: "Dave Carlson" <dcarlson@waterboards.ca.gov>, "Pat Leary" <pleary@waterboards.ca.gov>
Date: 9/26/2007 10:24:05 AM
Subject: Colfax NPDES draft permit comments

September 26, 2007

Dear Mr Carlson and Ms Leary,

Below are our comments on the August 7, 2007 draft NPDES permit for the City of Colfax Waste Water Treatment plant.

Comments 1 through 10 are connected with continuing problems at the Colfax sewage system. The format for these comments is as follows:

- a.. First, the problem area that the permit should address
 - b.. Second, the permit's response to this problem area, if any
 - c.. Third, the response to this specific problem that should be added to the CDO and/or the permit.
- Comments 11 through 27 are additional comments relating to other errors, omissions, and problems with the draft.

Please provide us with your response to these comments at the earliest possible date. If you have any questions please call us at 530-637-4211.

Thank you,

Allen and Nancy Edwards

Comments:

1. Problem: The current plant does not adequately treat sewage from the City of Colfax.

- a.. The tertiary components of the plant have a backwards operation order of operations that does not adequately disinfect the effluent;
 - b.. The plant has experienced a buildup of solids that has caused excesses of ammonia, sewage odors downstream, and possibly other problems. The system has no mechanism for disposing of these solids;
 - c.. Current plant discharges all inflows to Smuther's ravine - in violation of the current permit, which requires that all treated effluent except leakage from the storage reservoir be disposed on site through the irrigation system. The current system was allow to operate (by Board staff) for a very short time - only to dewater the storage reservoir in preparation for lining it. This draft permit regards the current system as an "interim compliance" system for complying with the 2001 CDO even though there was no public review and no formal Board approval for using this system for that purpose.
 - d.. State Water Board staff have indicated that the city is now intending to keep the interim system as a backup for the new facility, so it will be operated at times in the future even when the new facility is operational. This would be a violation of the EIR for the plant upgrade, and leave in place a treatment facility that has repeatedly proven to be inadequate.
- Draft Permit response:

- a.. The draft states that the interim plant was installed in response to the 2001 CDO requirement to upgrade the plant. This statement is untrue -- the city's documents are clear that the current configuration was put in place solely to dewater pond three (the main storage reservoir). In addition, the city committed

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to meeting title 22 tertiary requirements in the current configuration. They did not.

b.. The permit ignores problems with the current plant, despite:

a.. Department of Health Services findings

b.. Regional Board staff findings

c.. Explicit language in the current permit.

a.. From a practical standpoint it appears that the Draft Permit allows essentially unlimited hookups to the sewage system.

b.. The draft permit is silent on the City's intention leave the current system in place and operate as needed in the future.

Needed:

a.. Correct the misstatements in the draft that indicate the current system was installed to meet the 2001 CDO:

b.. Order the City to immediately reconfigure the current system so that it meets the requirements of Title 22 for tertiary treatment - and adequately disinfects all effluent;

c.. Order the City to immediately implement a system for safely disposing the solids produced by the treatment system;

d.. Order mandatory and automatic penalties for failure to fix the interim system as ordered;

e.. Order the city to immediately install a pipe that protects downstream users from the inadequately treated effluent.

f.. Order the city to cease adding new hook-ups to this system.

2. Problem: The main storage reservoir (pond 3), which contains a mix of untreated, partially treated, and treated effluent, leaks.

a.. The pond still leaks effluent to surface water except when it is essentially empty;

b.. Effluent in the pond percolates to ground water.

c.. Based on City comments, the interim system was undersized and is unable to adequately dewater the storage reservoir in preparation for lining.

Draft Permit Response: The Cease and Desist Order (CDO) speaks to lining the pond, but language in the CDO has the following shortcomings:

a.. Discusses lining the pond but does not actually require lining the pond. The specific language speaks about preventing seepage discharges, but does not require lining the pond in order to explicitly prevent all leaks to surface water and all percolation to ground water. In addition, the CDO has language that seems to give the City the alternative of either fixing the storage pond or fixing I&I problems.

b.. Requires action (the vague language discussed above) by October 2008, but there is no evidence that the current city facilities can safely and sufficiently dewater the pond for this schedule - particularly if the City adds more hookups (an intention which city officials have made public).

Needed:

a.. An explicit order to line all ponds and storage reservoir (to seal the entire system from surface and ground water) by specified dates;

a.. Order mandatory and automatic penalties for failure to line the ponds and storage reservoir on schedule.

b.. Not allow any additional hookups until the ponds and storage reservoir have been completely lined.

3. Problem: The plant (including its storage system) has insufficient hydraulic capacity to accommodate wet season inflows

a.. The Colfax plant has a long history of spilling from the storage reservoir during the wet season.

b.. Despite this history, the City has never been fined or faced other consequences for any of the spills.

c.. Current permit set inflow limits for the dry season at 160,000 gallons/day in order to avoid spills;

d.. Even with this permit limit, and with an interim plant treatment capacity of 0.65 mgd, the plant spilled in 2005/6;

e.. The City has flow calculations (which are flawed) demonstrating that the upgraded plant will not spill. But the planned upgrade will have lower treatment capacity than the current configuration. In addition, the City's flow analysis used inflow data from the year 2000, an average precipitation year, rather than 2005/6,

a high precipitation year;

f.. There is an open question on the capacity of the storage pond. The City has variously stated that the capacity is 51 and 69 million gallons. They used 69 million gallons in their flow analysis, but there are strong indications that this is an overstatement. There are other questions about assumptions used in the city's flow analysis, such as the area receiving rainfall.

g.. All facts considered, it appears that the treatment system upgrade does not have sufficient treatment capacity to accommodate high inflows during wet years.

Draft Permit Response:

a.. The draft mis-stated current inflow limit - stating that it is 200,000 dry season gallons/day when it is, in fact 160,000 gallons per day. (See additional comment #11 below for more detailed.)

b.. The draft mis-stated the situation with spills from the system (see additional comment #13 below).

c.. The draft relies on the City's flawed flow analysis.

d.. The draft functionally eliminates inflow limits.

e.. The draft sets annual average discharge limits at 0.5 mgd for the interim plant, and 0.65 mgd for the upgraded plant. But flow analysis using historic inflows and rainfall indicate that, with these discharge limits the plant is likely to spill during high precipitation years. In addition, the draft lists the limit for the interim at 0.5 mgd when the City says its capacity is 0.65mgd; and lists the limit for the upgraded plant at 0.65 mgd when the planned capacity is 0.5 mgd.

f.. The discharge limits in the draft would immediately violate the City's EIR for its plant upgrade

g.. This draft would, in practice, eliminate any restriction on hookups.

Needed:

a.. Correct the misstatements in the draft regarding the current inflow limit.

b.. Order Board staff to conduct a flow analysis using reasonable worst-case assumptions (using 2005/6 historic flow and precipitation data, and verified assumptions on storage reservoir capacity, plant area, etc). Present this analysis for public review and input.

c.. Order an immediate review of the capacity of the planned upgrade to determine whether it has sufficient capacity to accommodate likely inflows. This review should be conducted in a public forum;

d.. Order the city to increase the capacity of the upgrade if analysis shows the current plans are inadequate;

e.. Correct the confusion of discharge limits between the current plant and the upgraded plant.

f.. Order an immediate moratorium on new hookups. This should stay in place until the City has fixed all system problems - collection, storage, and treatment, and has completed an upgrade that accommodates current flows and future growth.

g.. Order explicit and automatic penalties for spilling from the storage reservoir, and any other part of the sewage system.

4. Problem: Collection system leaks, and allows in I&I – The leaks in the collection system are causing the hydraulic overload to the treatment system, and causing the spills. They are also causing direct water and air pollution in the City. Correcting these problems is crucial to bringing the city into compliance with water quality laws.

a.. City data shows that winter inflows to the system are as much as 40 times higher than dry season inflows.

a.. The collection system leaks to headwaters of Bunch creek

b.. There are often widespread sewage smells in the center of the Colfax business district.

Draft Permit Response:

a.. The CDO discusses I&I repairs, but:

- Requires a backwards process for accomplishing the repairs (the CDO first orders implementation of a "capital improvement program", then analysis of the needs, then monitoring to provide data for the needs analysis. These three elements should be done in reverse order.)

- The CDO is ambiguous on when and to what degree the I&I repairs need to be completed (The CDO orders implementation of an I&I repair program by March 2008, but then seems to give the City until October 2013 to evaluate that program - presumably giving them until 2013 to complete the work. Even if the City were to totally reconstruct its collection system, it should not take 6 years).

- The CDO does not actually require the City to fix the I&I problems.

- The CDO talks about fixing the high inflow problems but does not talk about fixing the leaks out of the system into Bunch creek.

- The CDO does not speak to odor problems within the city.

Needed:

a.. Order an aggressive program, with milestones, to rebuild the collection system - to stop all I&I into the system (and all leaks out, See #14 below);

b.. This order should require that the collection system is completely repaired within 3 years of its issuance.

a.. Order explicit and automatic penalties for missing the deadline and milestones

5. Problem: City has started construction of new plant, but there is no mechanism to assure they will build what is needed; or, in fact, even complete construction.

Draft Permit response:

a.. The deadline for the completion of the upgrade project is Dec 31, 2008.

b.. There on nothing in the permit that speaks to assuring the City builds what is needed, or even that they build what City council approved.

Needed:

a.. Order explicit milestones on the upgrade project

b.. Order explicit and automatic penalties for missing those milestones

c.. Do not allow any hookups until the upgrade project is complete and demonstrates compliance.

6. Problem: City has frequently cut off flows to Smuther's Ravine creek, leaving the effluent-dependent watercourse dry. This has killed and is continuing to kill riparian fauna and flora.

a.. The City cut off the flow to Smuther's Ravine for several weeks in the late summer of 2006;

b.. It has cut off the flow regularly in dry season of 2007, including at least 10 days in mid September.

Draft Permit response:

a.. Unlike the existing permit, the draft does not speak to this issue - does not prohibit the City from killing the creek environment by cutting off dry season flows.

Needed:

a.. Order the City to immediately either provide continuous minimum levels of flow to Smuther's Ravine (levels of flow that Department of Fish and Game determine are sufficient to maintain year round riparian habitat); or configure the treatment facility so that there is no discharge into Smuther's Ravine (return the watercourse to its pre-plant seasonal status). Note: See the Discussion on a pipeline in # 8 below.

b.. Order explicit and automatic penalties if the City violates the conditions of whichever stream flow option it chooses.

7. Problem: the City's monitoring program produces data that fails to honestly indicate the quality of treatment from the plant.

a.. Department of Health Services, in their 12/11/06 letter to the Regional Board, found that, because of the backwards design and inferior filters at the plant, "the fact that the effluent usually meets bacterial

standards does not indicate that the effluent is safe."

b.. The City has been regularly pretesting the discharge before collecting monitoring samples. If the pretests indicate a water quality problem, the staff shuts off the discharge and tweaks the plant before collecting the official monitoring samples. This practice violates the current requirements of its monitoring program for representative samples. (City staff explained this process to Regional Board staff during a site visit.)

c.. Even when the monitoring program indicates exceedances of permit limits (permit violations), they are not reported to Board staff for up to 2 months, and Regional Board staff rarely if ever responds to the reports.

Draft Permit response:

a.. The draft does not, in any way, discuss the unreliability of the monitoring data
Needed:

a.. Order the City to pay for a third party organization to implement its monitoring program. All exceedances of permit limits should be reported to the Board and the public within a week of their occurrence;

b.. Institute a Board staff program that automatically and immediately issues fine citations for each reported exceedance of permit limits.

8. Problem: The creek into which the effluent is discharged was seasonal before the plant was built. As a result, dry season flows in the creek are now entirely effluent that has leaked and been discharged from the plant. Unfortunately, badly designed and constructed facilities, unreliable operation and monitoring, and negligent compliance enforcement have left immediate downstream users at risk to the effects of polluted effluent for the entire operational history of this treatment plant. Immediate downstream users are suffering:

a.. Ongoing health risks to residents and any potential visitors;

b.. Severe economic consequences to farming operations because of the polluted water adjacent to their fields;

c.. Ongoing nuisance because of smells, foam, etc associated with the effluent in the creek.

Draft Permit response:

a.. The draft does require the City to complete the upgrade that the 2001 CDO ordered (completion was required by June of 2006), but does not discuss the problems of operating the current plant, quality control on the upgrade construction project, and quality control on plant operation after the upgrade is completed.

b.. The draft has minimal discussion on the thousands of violations of permit conditions at this plant. And it is silent on the consequences of those violations on immediate downstream water users.

c.. The draft omits any discussion of issues relating the City cutting off flows to the creek.

Needed:

a.. A clear recognition that based on history, even when (and if) the reconstruction project is completed, Colfax will still at least occasionally violate its permit limits and discharge polluted water into Smuther's Ravine creek and onto the farm immediately downstream;

b.. As a result, the Board needs to order the City to construct a pipe from the plant to the nearest year-round watercourse (Bunch creek is approximately 1.5 miles downstream from the plant).

9. Problem: The City has violated its permit conditions thousands of times during the term of the current permit.

a.. It has yet to face a full accounting of those violations, and yet to face actual consequences.

b.. Given past compliance and enforcement failures, the city has no incentive to prevent violations in the future.

Draft Permit response:

a.. The draft accepts the current facility as the "interim compliance plant" even though it is continuously out of compliance.

b.. The draft has a minimal discussion (pages F7 & F8) of past violations, but minimizes the compliance

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problems. For example, on page F8 #2, the draft spends 8 lines to discuss what, in fact, are thousands of violations that have occurred under the current permit.

c.. The draft does mention the ACL for 117 Migdon law violations that occurred between the year 2000 and March 2003. The Board has yet to collect fines on these (or any other permit violations). Otherwise the draft is silent on consequences for the City's compliance failures.

Needed:

- a.. A thorough description of all permit condition violations under the current permit;
- b.. The Board needs to order the City to face consequences for all its compliance failures under the current permit. This should be in the form of fines, only some of which can be diverted into compliance projects.
- c.. As discussed above, the Board needs to order automatic and immediate fines for any and all failures by Colfax to comply with the specifics of this order.

10. Problem: The City wants to immediately add hookups to its sewage system even though this system is hydrological and biologically overloaded, and has a long history of faulty operation and inadequate compliance.

Draft Permit response:

a.. Even though the Board discussed a moratorium during the June hearing on this permit, the current draft is silent on the issue.

Needed:

- a.. The Board needs to order a complete moratorium on all sewage hookups to the Colfax system.
 - b.. This order needs to remain in place until all problems associated with the system have been corrected, and the City has thoroughly proven that it can operate the system without violations.
- Additional comments on the Draft permit and CDO

11. The draft permit, CDO, and Fact Sheet incorrectly state that the current system is permitted at and is operating at a dry weather inflow of 0.2 million gallons per day. Effluent limits for specific pollutants are based on this incorrect number. The permit, CDO, and Fact Sheet, including the effluent limitations must be corrected

CDO page 1, Fact Sheet pages F-3, F-17, F-44, F-46, draft permit pages 9, 10, and others all state that the current dry weather inflow is 0.2 mgd or contain limitations based on an inflow of 0.2 mgd. The 2001 permit limits dry weather inflow to no more than 0.16 mgd, and at the June 2007 Regional Board meeting the city engineer testified that the current facility has a dry weather inflow of 0.16 to 0.165 mgd. Therefore, the statement in the documents that the inflow is currently 0.2 mgd is incorrect and basing the permit and CDO on this incorrect number allows the city to immediately increase the inflow of sewage into the current system by 25%. This increase should not be allowed for the following reasons:

a) City staff told us and Regional Board staff at a meeting on July 24, 2007 that they could have difficulty meeting the deadline for lining the storage reservoir because the current system may not be able to treat all of the current inflow. By allowing 25% more sewage into the current system, it would be more difficult for the city to meet the deadline and more likely that the downstream users and the environment will continue to be exposed to leakage from the reservoir.

b) The Department of Health Services has found that the current system does not adequately disinfect the wastewater; allowing an increase in sewage into the plant would increase the amount of inadequately disinfected effluent going into the creek, American River, etc.

c) In the past, the plant has frequently spilled partially treated wastewater. Increasing the sewage into the

facility will increase the likelihood and the amount of spills.

If the Regional Board staff intend to allow a 25% increase in sewage into the facility, they must very clearly state that that is their intent, so the Board members are not misled into believing that the new permit and CDO are not allowing increased inflow into the current system. This would require correcting all statements that suggest the current inflow is 0.2 mgd and making a very clear statement that the permit will allow immediate increases. As noted throughout our comments, we are strongly opposed to allowing more hookups until all problems at the plant have been corrected.

If, on the other hand, the intent is to not allow immediate increase in sewage inflow into the current system, then the permit, CDO and Fact Sheet must be changed so all references to 0.2 mgd and all limitations based on this number are corrected. The correct number is 0.16 mgd.

12. CDO page 2 states that lining the storage reservoir will provide a significant reduction in discharge flows to the receiving waters. No basis is provided for this statement; no data are available on the amount of groundwater seepage or the amount of seepage of wastewater into the ground.

13. CDO page 3 states that problems with discharges of wastewater over the spillway have been corrected. This past year, when rainfall was about half of normal rainfall levels, the reservoir did not spill, but in 2006, a wet year, it spilled 17 million gallons, according to city documents. It is not at all clear that the problem has been corrected.

14. There is no limit on average daily dry weather INFLOW. Given the city's long history of spills without consequence to the city, it should not be left in the city's hands to limit their inflow in order to meet outflow limits.

15. The documents state that the current facility was installed to comply with the previous CDO (draft permit page 1, fact sheet page F-4 etc). This is not true. Regional Board staff is well aware that the current system was put in place solely for the purpose of dewatering the pond and was intended to be a very short-term system. It was clearly stated in the 2004 letter to Mr. Landau that the current system was needed so the city could build the final facility by June 2006. The statements in the draft permit and fact sheet are misleading and should be corrected before the Board members get the idea that the current system is somehow acceptable.

16. Why are Tables 6 and 8 different? From the standpoint of protecting downstream users and the environment, shouldn't the city be required to meet the more protective levels?

17. Permit page 27 statement "ponds and storage reservoir.during the non-irrigation season". Since the draft would prohibit irrigation, this statement is inappropriate.

18. Permit page 27 states that "design seasonal precipitation, distributed monthly in accordance with historical rainfall patterns". While this may seem in theory to be a reasonable approach, it would have substantially underestimated the monthly inflows in 2005/6-rainfall season. A facility designed to meet that theoretical criteria could overflow. Instead, it seems appropriate to use the historical monthly distribution, OR actual data, whichever results in the higher numbers. That would be more protective of the downstream users and the environment.

19. Page D-5 states that records must be kept 3 years. This seems unreasonably short since the statute of limitations for Clean Water Act suits is 5 years, and the statute for cases of fraud is unlimited.

20. Page D-8 Twenty-Four-Hour Reporting. Noncompliance that may endanger health or the environment doesn't have to be reported until 24 hours after the discharger becomes aware of the problem. This doesn't seem to provide for adequate protection of the downstream users.

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I The permit must require immediate notification of the public when there are problems that could put the public at risk, including spills, upsets, groundwater contamination, etc. Downstream landowners must be contacted as well as a notice in the local newspaper.

21. Fact sheet page F-6 states that discharge is currently limited to 0.5 mgd. This is not true. City reports and monitoring data show 0.65 mgd or more. The current permit limits the City to a discharge of disinfected seepage only. This would be a substantially less than either 0.5 or 0.65 mgd.

22. Table F-2 lists highest daily discharge as 2.0 mgd from the current facility without justification. The City's monitoring data show the peak discharge is considerably higher.

23. Page F-8 states that "compliance with permit, CDO, and ACL is being evaluated." Is this true? If so, wouldn't the permit hearing be the proper place to make that evaluation public?

24. Page F-9 mid-page has a sentence about inspections that does not make any sense.

25. Page F-11 states that DFG has verified fish species present in unnamed tributary of Smuther's Ravine and downstream waters. Note that as of Monday 9/17/07 the tributary was dry and fish were dead because the plant had not been discharging for 10 days. The permit should have a provision requiring a minimum flow into the creek to sustain fish etc, or the water should be in a pipeline to the nearest year round creek - returning the creek to its pre-plant status as a seasonal creek.

26. Page F-39 Table F-8 has major number problems in the human health column.

27. Page F-57 states that daily monitoring for freeboard and pond elevation is required but the permit now requires only weekly monitoring. But during the wet season, the pond elevation can rise by nearly a foot a day. The permit should require daily freeboard monitoring.

CC: "Daniel Cooper" <cleanwater@sfo.com>, "Lynne Saxton" <lsaxton@envirolaw.org>, "Michael J. Chappell - work" <mike@lawyersforcleanwater.com>, "Don Mooney" <dbmooney@dcn.davis.ca.us>